

SIGMATHERM™ 538

DESCRIPTION

One-component, heat-resistant, moisture-curing (ethyl) silicate finish

PRINCIPAL CHARACTERISTICS

- Dry heat resistance up to 400°C (750°F)
- Excellent resistance to a large variety of solvents
- Resists radiation up to 5.0×10^8 rad

COLOR AND GLOSS LEVEL

- Pearl gray
- Flat

BASIC DATA AT 20°C (68°F)

Data for product	
Number of components	One
Mass density	1.7 kg/l (14.2 lb/US gal)
Volume solids	62 ± 2%
VOC (Supplied)	Directive 1999/13/EC, SED: max. 276.0 g/kg UK PG 6/23(92) Appendix 3: max. 480.0 g/l (approx. 4.0 lb/US gal)
Recommended dry film thickness	125 µm (5.0 mils)
Theoretical spreading rate	5.0 m ² /l for 125 µm (199 ft ² /US gal for 5.0 mils)
Dry to touch	1 hour
Full cure after	12 hours
Shelf life	At least 12 months when stored cool and dry

Notes:

- See ADDITIONAL DATA – Spreading rate and film thickness
- See ADDITIONAL DATA – Curing time

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Primed steel or previous coat

- Suitable coating (zinc silicate primer) must be dry, free from any contamination and zinc salts



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Substrate temperature and application conditions

- Surface temperature during application should be between -18°C (0°F) and 70°C (158°F)
 - Surface temperature during application should be at least 3°C (5°F) above dew point
 - Ambient temperature during application and curing should be between -18°C (0°F) and 50°C (122°F)
 - Relative humidity during curing should be above 50%
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INSTRUCTIONS FOR USE

- Stir thoroughly until homogeneous
 - Agitate continuously during application
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Air spray**Recommended thinner**

THINNER 21-06

Volume of thinner

10 - 20%, depending on required thickness and application conditions

Nozzle orifice

2.0 - 2.5 mm (approx. 0.079 - 0.100 in)

Nozzle pressure

0.3 MPa (approx. 3 Bar; 44 p.s.i.)

Note: A moisture and oil trap in the main air supply is essential

Airless spray

- Standard airless equipment can not be used. The pump Binks Alpha is the only acceptable airless pump having a 60:1 ratio and a 0.030" tip or higher

Recommended thinner

THINNER 21-06

Volume of thinner

0 - 10%, depending on required thickness and application conditions

Nozzle orifice

Approx. 0.84 - 0.89 mm (0.033 - 0.035 in)

Notes:

- Use the lowest possible spraying pressure
 - Hose length should not exceed 12 meters
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Cleaning solvent

THINNER 21-06

Note: All application equipment must be cleaned immediately after use

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	Theoretical spreading rate
125 µm (5.0 mils)	5.0 m ² /l (199 ft ² /US gal)

Notes:

- If is not possible to measure the actual DFT as the finish will soak partly into porous zinc silicate primer
- Immediately after spraying the finish should have a completely wet appearance
- Excessive thickness in overlapping areas should be avoided otherwise cracking and flaking may occur

Curing time for DFT up to 125 µm (5.0 mils)		
Substrate temperature	Insoluble to water	Dry to handle
10°C (50°F)	1 hour	6 hours
20°C (68°F)	30 minutes	4 hours
35°C (95°F)	15 minutes	2 hours

Notes:

- Drying times are dependent on air and steel temperature, applied film thickness, ventilation and other environmental conditions
- Adequate ventilation must be maintained during application and curing
- Maximum recoating time depends on coating system to be used
- Drying times may be accelerated by wetting the surface with fresh water

SAFETY PRECAUTIONS

- This is a solvent-borne paint and care should be taken to avoid inhalation of spray mist or vapor, as well as contact between the wet paint and exposed skin or eyes

WORLDWIDE AVAILABILITY

It is always the aim of PPG Protective and Marine Coatings to supply the same product on a worldwide basis. However, slight modification of the product is sometimes necessary to comply with local or national rules/circumstances. Under these circumstances an alternative product data sheet is used.

REFERENCES

• CONVERSION TABLES	INFORMATION SHEET	1410
• EXPLANATION TO PRODUCT DATA SHEETS	INFORMATION SHEET	1411
• SAFETY INDICATIONS	INFORMATION SHEET	1430



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